

Appl. No. : 10/719,909
Filed : November 21, 2003

AMENDMENTS TO THE CLAIMS

Claims 1-22 were pending prior to entry of these amendments. Claims 13-22 are withdrawn. Please amend Claims 1 and 10. Please cancel Claims 13-22.

1. (Currently amended) A process for electrochemically removing overburden conductive material formed over cavities having cavity conductive material therein on a surface of a workpiece, comprising the steps:

contacting the overburden conductive material with a porous conductive member insulatively coupled to an electrode;

applying a voltage between the porous conductive member and the electrode; and establishing relative motion between the workpiece and the porous conductive member insulatively coupled to the electrode ~~and the workpiece; and [[to]]~~

electrochemically removing ~~remove~~ the overburden conductive material on the surface of the workpiece while establishing relative motion.

2. (Original) The process of claim 1, wherein the step of contacting includes contacting less than 10% of an area of the workpiece surface.

3. (Original) The process of claim 1 further comprising maintaining a gap between the electrode and the porous conductive member.

4. (Original) The process of claim 3 further comprising bridging the gap between the electrode and the porous conductive member.

5. (Original) The process of claim 3, wherein the gap is in the range of 0.1 to 5 millimeters.

6. (Original) The process of claim 1, wherein the step of contacting the overburden conductive material includes laying an area of the porous conductive member on the overburden conductive material.

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7. (Original) The process of claim 1, wherein the step of establishing relative motion includes sweeping the porous conductive member across the overburden conductive material.

8. (Original) The process of claim 1, wherein the step of establishing relative motion includes sweeping the porous conductive member across substantially an entire surface of the workpiece.

9. (Original) The process of claim 1, wherein the step of establishing relative motion includes moving the surface of the overburden conductive material to sweep the porous conductive member across the overburden conductive material.

10. (Currently amended) The process of claim 1 further comprising A process for electrochemically removing overburden conductive material formed over cavities having cavity conductive material therein on a surface of a workpiece comprising the steps:

contacting the overburden conductive material with a porous conductive member insulatively coupled to an electrode;

applying a voltage between the porous conductive member and the electrode; and
establishing relative motion between the porous conductive member insulatively coupled to the electrode and the workpiece to electrochemically remove the overburden conductive material on the surface of the workpiece; and

self-limiting the electrochemical removal of the overburden conductive material after exposing the cavity conductive material.

11. (Original) The process of claim 10, wherein the step of self-limiting includes contacting the porous conductive member with an underlying barrier layer.

12. (Original) The process of claim 11, wherein the step of self-limiting includes sensing a reduced current drop between the porous conductive member and the electrode.

13.-22. (Canceled)